

**Bonneville Power Administration
Fish and Wildlife Program FY99 Proposal**

Section 1. General administrative information

Operate Independent Scientific Advisory Board

Bonneville project number, if an ongoing project 9600500

Business name of agency, institution or organization requesting funding
Columbia Basin Fish and Wildlife Foundation

Business acronym (if appropriate) CBFWF

Proposal contact person or principal investigator:

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Email address kathie@cbfwf.org; also emerrill@nwppc.org

Subcontractors.

Organization	Mailing Address	City, ST Zip	Contact Name
Dr. Peter A. Bisson	USDA Forest Service, Olympia Forestry Sciences Lab, 3625 93rd Avenue SW	Olympia, WA 98512	
Dr. Dan Goodman	503 W. Cleveland St	Bozeman, MT 59715	
see key personnel for addresses, alt-r did not add rows			

NPPC Program Measure Number(s) which this project addresses.
3.2B, 3.2C.1

NMFS Biological Opinion Number(s) which this project addresses.
NMFS established the ISAB to review the implementation of the Proposed Recovery Plan for Snake River Salmon and other actions implemented pursuant to the ESA.

Other planning document references.

The ISAB fulfills the recommendation for the creation and implementation of a Salmon Advisory Panel as described in the NMFS Proposed Snake River Salmon Recovery Plan, March 1995, III.0.1.b.

Subbasin.

n/a

Short description.

Provide independent scientific advice and recommendations on issues related to regional fish and wildlife recovery programs under the Northwest Power Act and the Endangered Species Act.

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
	Anadromous fish		Construction	+	Watershed
	Resident fish		O & M	+	Biodiversity/genetics
	Wildlife		Production	+	Population dynamics
	Oceans/estuaries	+	Research	X	Ecosystems
	Climate	+	Monitoring/eval.	+	Flow/survival
X	Other	+	Resource mgmt	+	Fish disease
		X	Planning/admin.	+	Supplementation
			Enforcement	+	Wildlife habitat en-
			Acquisitions		hancement/restoration

Other keywords.

peer review, independent scientific analysis

Section 3. Relationships to other Bonneville projects

Project #	Project title/description	Nature of relationship
8907201	Funding for ISAB member	BPA-DOE contract to pay for Dr. Charles Coutant's ISAB services.

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Provide scientific review and recommendations to NPPC as described in the FWP	a	evaluate the fish and wildlife program on its scientific merits every two years,
		b	identify critical uncertainties that should be the focus of research efforts under the Council's program
		c	oversee the development of an experimental design to test fundamental hypotheses regarding mainstem passage
2	Provide scientific review and recommendations to NMFS as provided in the Proposed Recovery Plan	a	review the scientific and technical issues associated with efforts to improve anadromous fish survival through all life stages, based on adaptive management approaches
		b	develop guidelines and procedures for peer review of research and proposals
		c	provide technical review of research proposals
		d	review and provide advice on priorities for conservation and recovery efforts including research, monitoring and evaluation
		e	provide specific scientific advice on topics when needed for recovery and conservation
3	Provide Independent Scientific Peer Review and Advice to the Region	a	Conduct reviews requested by Tribes, Fish and Wildlife Agencies and Congress and submitted by NMFS and NPPC
		b	Conduct reviews that the board itself generates with approval of NMFS and NPPC
4	Operate the ISAB (CBFWF)	a	prepare and administer contracts with individual members of the ISAB for their services

		b	provide the administrative activities of the ISAB including administrative and logistical support
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Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	1/1996		35.00%
2	1/1996		35.00%
3	1/1996		13.00%
4	1/1996		17.00%
			TOTAL 100.00%

Schedule constraints.

Reviews mandated by Congress could interfere with ISAB reviews requested by NMFS and NPPC.

Completion date.

The ISAB is an ongoing project. Its longevity and workload are determined by NMFS and NPPC.

Section 5. Budget

FY99 budget by line item

Item	Note	FY99
Personnel	CBFWF admin. asst. and budget analyst	\$24,096
Fringe benefits	CBFWF	\$9,397
Supplies, materials, non-expendable property	CBFWF	\$265
Operations & maintenance	CBFWF	\$212
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		
PIT tags	# of tags:	
Travel	CBFWF	\$796
Indirect costs		
Subcontracts	ISAB services, travel and supplies	553,625
Other	Cost Pool Allocation - 12.8%	75,314
TOTAL		\$663,705

Outyear costs

Outyear costs	FY2000	FY01	FY02	FY03
Total budget	\$683,616	\$704,124	\$725,248	\$747,005
O&M as % of total				

Section 6. Abstract

The Independent Scientific Advisory Board (ISAB) was established by the Northwest Power Planning Council (the Council) and the National Marine Fisheries Service (NMFS) to provide independent scientific advice and recommendations on issues related to regional fish and wildlife recovery programs under the Northwest Power Act and the Endangered Species Act. The ISAB is designed to foster a scientific approach to fish and wildlife recovery and to ensure the use of sound scientific methods in the planning and implementation of research related to these projects. NMFS and the Council request that the ISAB review specific projects, proposal, and plans. Thus, the extent and subject matter of ISAB reviews varies from year to year. Each review has a schedule for completion. In completing a review, the ISAB follows specific procedures and adopts recommendations by consensus. ISAB reports are submitted to and distributed by NMFS and the Council.

Section 7. Project description

a. Technical and/or scientific background.

The Need for Independent Scientific Analysis: the Creation of the ISAB

In *Snake River Salmon Recovery Team: Final Recommendations to the National Marine Fisheries Service*, May 1994, III.D., the team states, “[t]here will always be scientific debate, but where there is peer review and objective analysis, it should be possible to reach a scientific basis for decisions.” The creation and continuation of the ISAB recognizes this need for a process to provide independent science to the region. It recognizes that scientific debate must remain independent and not, in reality or perception, be guided by policy consideration or institutional loyalty.

The history of the ISAB began in 1989 when the fishery managers and the Bonneville Power Administration created the Scientific Review Group (SRG) to review and provide advice on the projects and strategies proposed for funding by Bonneville under the Council’s fish and wildlife program. In 1994, the Council’s Columbia River Basin Fish and Wildlife Program called for Bonneville to fund an Independent Scientific Group (ISG). The ISG was asked to provide a biennial review of the scientific merits of the Council’s program, identify critical scientific questions, and oversee the development of an experimental design to test key hypotheses regarding salmon passage through the dams on the Columbia and

Snake rivers. In 1995, rather than create two groups, Bonneville, the Council and the fisheries managers agreed to use the SRG as the Independent Scientific Group.

In 1995, NMFS provided for the formation of a Scientific Advisory Panel (SAP) in its Proposed Recovery Plan for Snake River Salmon. The Proposed Recovery Plan, III.0.1.b, states that the establishment of a Scientific Advisory Panel is essential to ensure that the best science is clearly understood and used in the recovery process. This was consistent with the Snake River Salmon Recovery Team's recommendation to create a Salmon Oversight Committee. The recovery team's recommendations emphasized the need for a scientific oversight group to ensure that the Columbia Basin fish and wildlife management works efficiently, to promote relevant science and to maintain the region's focus on long-term recovery success.

Rather than create two groups, NMFS and the Council recognized the need to consolidate these groups and created the ISAB to avoid gridlock over scientific uncertainty, circumvent unnecessary additional research, and resolve conflicting advice and opinions on recovery issues and measures. Because of its dual nature, the ISAB plays an important role in developing a basinwide framework that integrates the specific recovery requirements of NMFS actions under the ESA with the broader goals of the NPPC Fish and Wildlife Program to mitigate for losses associated with the hydroelectric system.

b. Proposal objectives.

ISAB Objectives and Tasks

In FY99, the ISAB will continue to address the objectives which were developed to implement NPPC Fish and Wildlife Program measures 3.2B and 3.2C.1, and NMFS Proposed Recovery Plan task III.0.1.b. These tasks and objectives are part of the ISAB's Terms of Reference, August 1996.

The primary objectives of the ISAB are: to provide independent scientific advice and recommendations on issues related to regional fish and wildlife recovery programs under the Northwest Power Act and the Endangered Species Act, to foster a scientific approach to fish and wildlife recovery, and to ensure the use of sound scientific methods in the planning and implementation of research related to these projects.

Although the exact projects, plans and programs that will be reviewed in FY99 are not known at this time, the Council, NMFS, and the ISAB have identified the long-term tasks to meet these objectives:

I. The Council directs the ISAB to accomplish three major tasks that address issues related to fish and wildlife populations affected by operation and development of the hydroelectric system. These tasks include:

- a) Evaluation of the fish and wildlife program on its scientific merits every two years.

- b) Identification of critical uncertainties that should be the focus of research efforts under the Council's program.
- c) Oversight of the development of an experimental design to test fundamental hypotheses regarding mainstem passage.

II. NMFS is primarily interested in anadromous fish conservation and management. Its tasks for the ISAB include:

- a) Review the scientific and technical issues associated with efforts to improve anadromous fish survival through all life stages, based on adaptive management approaches.
- b) Develop guidelines and procedures for peer review of research and proposals.
- c) Provide for technical review of research proposals.
- d) Review and provide advice on priorities for conservation and recovery efforts, including research, monitoring and evaluation.
- e) Provide specific scientific advice on topics when needed for recovery and conservation efforts.

III. Tribes, fish and wildlife agencies and others may submit questions to the ISAB through the Council and NMFS. The ISAB may also identify questions. The coordinators and the ISAB periodically review these questions and decide which are amenable to scientific analysis, are relevant to the Council and NMFS's program, and fit within the ISAB's schedule and budget.

CBFWF Objectives and Tasks

IV. CBFWF Administration Support

- d) Prepare and administer contracts with individual members of the ISAB. Pay for their services and reimburse their travel expenses. Provide financial accountability for the funds.
- e) Provide the administrative activities of the ISAB including logistical support for meetings.

c. Rationale and significance to Regional Programs.

Rationale for the ISAB and Significance to the FWP and the Region

As described above, the ISAB was established to fulfill FWP measures 3.2B and 3.2C.1 and its tasks and objectives were developed by the Council to specifically address those measures. A major contribution of the Independent Scientific Group, an early incarnation of the ISAB, is *Return to the River*. This report was created to meet FWP measure 3.2B.1 that calls for a review of the scientific underpinnings of the FWP. In the report, the Independent Scientific Group developed a conceptual foundation based on the premise that an ecosystem with a mix of natural and cultural features can still sustain a broad diversity of salmon populations in the Columbia River Basin. The ISG named

this ecosystem “normative,” which means an ecosystem where specific functional norms or standards that are essential to maintain diverse and productive populations are provided. In developing the definition of normative, the ISG looked at what conditions lead to high levels of salmon productivity in less-constrained river systems, as well as in the historic Columbia River Basin.

This “normative” concept and other findings of the ISAB will provide some of the underpinnings for a new regional framework that can unite the various salmon recovery programs in the region. This framework will focus and define recovery and research efforts and thus will relate to all recovery projects in the basin.

d. Project history

Most Recent ISAB Project Reports and Technical Papers

Each of the reports listed below respond to the ISAB’s primary objectives and particular tasks described in proposal section b. For example, *Return to the River* addresses Council tasks I.a-c; *ISAB 97-6: Review of the NMFS 1997 Draft of the Snake Recovery Plan* addresses NMFS task II.a,d, and e.

NPPC Report 96-6 by the Independent Scientific Group: *Return to the River*. Prepublication Copy (September 10, 1996)

ISAB 97-1: Review of the National Marine Fisheries Service’s “1996 Annual Report to the Oregon Department of Environmental Quality” related to Waiver of Dissolved Gas Standard (January 6, 1997)

ISAB 97-2: Review of a Research Proposal for Inclusion in the 1997 Smolt Monitoring Program: Comparative Survival Rate Study of Hatchery PIT Tagged Chinook (January 13, 1997)

ISAB 97-3: Ecological impacts of the flow provisions of the Biological Opinion for endangered Snake River salmon on resident fishes in Hungry Horse and Libby systems in Montana, Idaho, and British Columbia (March 4, 1997)

ISAB 97-4: Review of Proposal: Lake Pend Oreille Fishery Recovery Project (March 7, 1997)

ISAB 97-5: Review of a Draft Programmatic Environmental Impact Statement: Impacts of Artificial Salmon and Steelhead Production Strategies in the Columbia River Basin (April 1, 1997)

NPPC Report 97-15: Downstream Passage for Salmon at Hydroelectric Projects in the Columbia River Basin: Development, Installation, Evaluation (October 1997) by Richard R. Whitney, Lyle D. Calvin, Michael Erho and Charles C. Coutant.

ISAB 97-6: Review of the August 8, 1997 Draft of the Snake River Salmon Recovery Plan (December 29, 1997)

ISAB 97-7: Review of NMFS “1997 Draft Annual Report to the Oregon Department of Environmental Quality” Related to Waiver of Dissolved Gas Standard (December 22, 1997)

ISAB 98-1: Review of the 1998 Workplan for the Comparative Survival Rate Study of Hatchery PIT Tagged Chinook (January 6, 1998)

Fiscal Year 1998 Reviews in Progress

Task 1: Comprehensive Review of Artificial Production in the Columbia River Basin

Task 2: Synthesis of Scientific Reviews Regarding Restoration of Fish and Wildlife in the Columbia River Basin

Task 3: Publication of Return to the River

Task 4: Review of NMFS 1998 Plan for Transportation of Juvenile Salmon

Task 5: Review of Army Corps of Engineer Capital Construction Projects

Task 6: Development of Framework for NMFS Recovery Plan

Years Underway

ISAB: 1996-present; ISG: 1995-1996; SRG: 1989-1994

Past Costs

FY98 Budget is \$632,708. In FY97, the ISAB spent \$468,252. In FY96, the ISAB/ISG spent \$575,398.

e. Methods.

ISAB Methods and Review Procedures

The ISAB methods are described in its formally adopted procedures policy. The objectives of its procedures are to: (1) ensure understanding by the ISAB of the scope and nature of the issues(s) for which review is requested by the Council and NMFS, (2) ensure that those groups affected by the ISAB review are ensured of a complete and fair review of the issue(s) by the ISAB, (3) ensure written documentation of ISAB recommendations that is available to those reviewed and others, (4) ensure that administrative and policy implications of the ISAB advice to Council and NMFS are left to those agencies, and (5) allow appropriate technical/scientific dialogue between the reviewed group and the ISAB through the Council and NMFS.

The ISAB's review procedures include:

1. Selection of the Review Team. The ISAB as a whole is responsible for the report, with a subcommittee of the ISAB generally assigned responsibility for detailed study and preparation of an initial draft report. When expertise is needed that is not represented on the Board, outside experts may be contracted to serve as temporary participants.
2. ISAB Preparation. The ISAB assesses the materials needed to carry out the requested review or analysis. The board obtains relevant materials.
3. Notification of Those Reviewed. Those being reviewed are appraised of the situation by the Council and NMFS. The notification describes the request being made of the ISAB, requests cooperation in the review, lists the main materials

that the ISAB has available for the review, and requests that additional relevant materials, if any, be provided. All volunteered materials are to be clearly marked for relevance (e.g., specific pages or sections of a report, specific sets of data, etc.) and include a relevant synthesis as part of the written transmittal.

4. Meeting Between ISAB and Individuals in Possession of Relevant Information. In some circumstances, but not all, a meeting with those having relevant information or those responsible for the project may be a fruitful way to speed communication and understanding. Such meetings are held at the ISAB's request.

5. Contacts During Conduct of the Assignment. The ISAB, its subcommittee, or members of the team may contact (by any suitable means) individuals relevant to the ISAB assignment for additional information or clarification. The ISAB initiates these contacts; it is not appropriate for those being reviewed to seek to influence the ISAB or its members. Summary records should be kept of such contacts.

6. Report. All reviews or analyses conducted of the ISAB are to be completed by presentation of a written report, adopted by consensus in the ISAB and submitted to the Council and NMFS. The report is to include reference to the specific request, procedures followed by the ISAB in addressing the request, background information on the issue, description of materials reviewed, a narrative of the analysis, conclusions and recommendations, a list of references cited, and (if relevant) appended comments or suggestions for the benefit of those being reviewed. The ISAB's advisory report is to Council and/or NMFS, not to the entity being reviewed or those affected by the review.

7. Comments on the Final Report. All comments on the completed ISAB report are to be directed to the Council and/or NMFS. The ISAB may be asked by Council/NMFS to respond to technical and scientific comments. If so, there is to be a formal letter of request, the ISAB responds to the Council and/or NMFS, and further dialogue with commentators is at the discretion of the Council and NMFS.

f. Facilities and equipment.

The ISAB meets at the Council offices in Portland and NMFS facilities in Seattle. ISAB members are expected to use their own offices and computer equipment. The members' computer systems are adequate to transfer files and communicate through email. This contract does not pay for the acquisition of facilities or equipment.

g. References.

Section 8. Relationships to other projects

In September 1996, the first and only amendment to the Northwest Power Act was signed into law. The amendment, which was sponsored by Washington Senator Slade Gorton, called on the Council to increase the scientific scrutiny through which fish and wildlife recovery projects are prioritized for implementation and to broaden our review of projects to include ocean conditions and cost effectiveness. In response to the new legislation, the Council formed an Independent Scientific Review Panel (ISRP), which includes scientists nominated by the National Research Council. Eight members of the ISAB were selected to serve on the ISRP. Because of this overlap of membership and mission, the ISAB was instrumental in the development of the ISRP.

Section 9. Key personnel

Appointment Procedures for ISAB Members

Members of the ISAB are appointed by the chair of the Northwest Power Planning Council and the regional director of the National Marine Fisheries Service (NMFS). These appointments are based on a set of recommendations submitted by an ad hoc selection committee of senior academic scientists and the National Research Council. The recommendations are based on needed expertise, scientific accomplishment, and the ability to work independently as part of a multi-disciplinary group. The selection committee considers nominations submitted by regional agencies, the ISAB, fish and wildlife managers, tribes and interest groups. The selection committee also submits nominees.

ISAB members are reimbursed for travel costs and are paid at an hourly rate for time spent on tasks approved by NMFS and the Council.

ISAB Members FY97 and FY98 (*italics indicates that the member's term will come due before FY99*)

Peter A. Bisson, Ph.D., a specialist on habitat issues at the Olympia (Washington) Forestry Sciences Laboratory of the U.S. Forest Service.

Charles C. Coutant, Ph.D., senior resource ecologist, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Daniel Goodman, Ph.D., an expert in ecological risk assessment at Montana State University in Bozeman.

James A. Lichatowich, M.S., consulting fisheries scientist, Alder Creek Consulting, Washington, formerly assistant chief of fisheries, Oregon Department of Fish and Wildlife.

William Liss, Ph.D., a fisheries professor at Oregon State University in Corvallis.

Lyman McDonald, Ph.D., consulting statistician at Western Ecosystems Tech., Inc., Cheyenne, Wyoming, formerly a professor at the University of Wyoming.

Philip Mundy, Ph.D., consulting fisheries scientist from Lake Oswego, Oregon, and former manager of fisheries science for the Columbia River Inter-Tribal Fish Commission.

Brian Riddell, Ph.D., an expert in international fisheries management at the Department of Fisheries and Oceans Canada, Nanaimo, British Columbia.

Jack A. Stanford, Ph.D., a professor of ecology, University of Montana, and director of the university's Flathead Lake Biological Station.

Richard R. Whitney, Ph.D., ISAB Co-chair, consulting fisheries scientist, Wenatchee, Washington, formerly a professor in the School of Fisheries, University of Washington.

Richard N. Williams, Ph.D., ISAB Chair, population and evolutionary genetics, ecology. Graduate Affiliate Faculty, Aquaculture Research Institute, University of Idaho.

NMFS and NPPC Coordinators

Michael Schiewe, Ph.D., with the National Marine Fisheries Service's Northwest Fisheries Science Center in Seattle.

Willis E. McConnaha, M.S., manager of program evaluation and analysis for the Northwest Power Planning Council.

CBFWF Contract Administration

Kathie Titzler, accounting degree and three years of contract management experience

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Dr. Richard Williams
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Meridian, ID 83642

Section 10. Information/technology transfer

The ISAB presents its reviews and recommendation through reports and/or presentation to NMFS and the Council. NMFS and the Council distribute the ISAB's reports to the authors and sponsors whose projects were reviewed. The ISAB reports are made available to the public and are posted at the Council website. The ISAB chair answers questions from the press and makes presentations on ISAB findings to agencies, Congress, and educational institutions. Occasionally, an ISAB report is independently published. In 1998, the American Fisheries Society is publishing the ISG's report *Return to the River*.